The role of Feedback, Accountability and Learning in Organizational Change and Innovation: A theoretical framework

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Abstract

Ombudsmen and Supreme Audit Offices can form a source for innovation in the public sector. Their recommendations constitute an external pressure for organizations to improve and innovate. Since these recommendations are usually not compulsory, their effect is highly dependend on organizational factors at the receiving end. This paper discusses the facets of three of the most complex and all-encompasing concepts to influence receptiveness and effectiveness of policy recommendation: feedback, accountability and learning. Based on an exensive literature review the authors explain the many aspects of these factors, and show how they cause and influence change and innovation, with a specific focus on the public sector. The authors conclude with recommendations for further research, based on the explanatory model that feedback, accountability and learning could form for differentiation in change and innovation patterns, failures and successes.

Key words: Change, Innovation, Public Sector, Feedback, Accountability, Learning

0. Content

0. Content 3
1. Introduction 4
1.1. Public Sector Innovation 5
1.1.1 Lack of competition 5
1.1.2 Risk-avoidance 5
1.1.3 Short-termism 5
1.1.4 Rule-obsession 6
2. Learning 6
2.1 Cybernetic system learning: corrective system learning on the basis of feedback 6
2.2 Social learning 8
2.3 Organizational learning 8
2.3.1 Organizational learning is a social affair 10
2.3.2 Exploitation, exploration and organizational survival 10
2.3.3 Tacit and explicit knowledge, knowledge conversion, and knowledge management 12
2.3.4 Organizational learning as a combination of cognition and behaviour 13
2.4 Enabling factors for public sector learning 14
3. Systems, feedback, and environment 15
3.1 The “open systems approach” to organization: the organism metaphor 16
3.2 Autopoiesis and the (relatively) closed nature of systems 20
3.3 Feedback 22
3.4 Feedback for public sector organizations: typologies 24
4. Accountability 27
What is public accountability? 27
4.1 The fundamental notion of accountability 27
4.2 Classifications of public accountability 30
4.3 The functions of accountability mechanisms 32
4.3 The potential contribution of (administrative) accountability mechanisms 32
5. Conclusion 36
6. References 38
7. Annex 42

1. Introduction

Working Group 3 of the LIPSE project[1], of which this working paper is a result, focused on innovations in public administrations on the one hand, and policy recommendations by Supreme Audit Institutions (SAIs) and Ombudsmen on the other. Concerning these research goals, we focused on the research question: How do Ombudsmen and SAIS influence public sector innovation? The policy recommendations these institutions publish, based on their respective investigations or audits, form an external stimulus for change and innovation. However, these recommendations in itself will not cause any change, and won't be any kind of inspiration, if internal structures for change in the public sector organizations under scrutiny are not susceptible for change and innovation. The literature suggests that three processes and mechanisms play an important role in the initiation of change, and thus the effectiveness of SAIs and Ombudsman recommendations: feedback, accountability and learning. We are interested to know if they play a decisive role in sustaining or regenerating change, and if so, in what way? By investigation the influence of these factors, we will be able to say when and how Ombudsmen and SAIs recommendations will have any effect in constituting change and fostering innovation.

On the basis of an extensive literature review, on which we will further expand in chapter two, we have found theoretical and empirical arguments supporting the thesis that feedback, accountability and learning might play a decisive role in the patterns of change and innovation within public sector organizations. In short, these arguments come down to this:

- Feedback information allows an organization to correct its errors, to adjust its goals, to restore its performance levels, and to align itself with its environment (Van der Knaap, 1995; Fiol & Lyles, 1985; Morgan, 2006; Katz & Kahn, 1978; Downs, 1967; Walker, 2013).
- Accountability mechanisms, more specifically the public nature of the account giving and the possibility of sanctions, may provide the incentive for public officials to actually make changes in order to improve the performance of their organization (Bovens et al., 2008; Wynen et al., 2014).[2]
- Finally, an organization which is characterized by a learning culture, has an open and receptive attitude towards different opinions and alternative ways of doing things, and has a tolerance for errors and risk-taking. Ideally, this open mindset is supplemented with structural and procedural arrangements that allow organizations to actively search for and process relevant feedback information, and to share this information within the organization and beyond (Garvin et al., 2008; Popper & Lipshitz, 2000; Greiling & Halachmi, 2013).

Our expectation is that different constellations of these three dimensions (together called the FAL-model) at the level of the organization will lead to different patterns of change and innovation. These factors form the fertile ground in which the seeds, policy recommendations by Ombudsmen and SAIs for example, can blossom into successful social innovation.

[1] More info can be found at www.lipse.org

[2] However, an accountability regime which focuses too harshly on mistakes and sanctions may discourage entrepreneurship, risk-taking, initiative and creativity, and instead may provoke defensive routines, paralysis and window-dressing (Van Loocke & Put, 2011; Bovens, 2005; Bovens et al., 2008; Behn, 2001; Hartley, 2005).

In this working paper we will investigate the extensive body of literature surrounding the factors Feedback, Accountability and Learning. All three are comprised of many facets, and influence innovation in their own particular ways. After giving a short introduction on the issues and particularities of public sector innovation, we will respectively delve into the literature of factors enabling or disabling public sector innovation through Learning, Feedback and Accountability.

1.1. Public Sector Innovation

Many observers are critical of the innovative nature of the public sector. It has been argued that the political, democratic and legal context of public administration constitute an impediment to innovation. Several reasons can be given for this. Drawing on the work of Bekkers et al. (2011), Bekkers et al. (2013) and Pollitt (2011), we discuss a few of these reasons: lack of competition, risk-avoidance, short-termism, and rule-obsession.

1.1.1 Lack of competition

Many observers indicate that competition is one of the most important incentives for improvement and innovation. Organizations in a competitive environment can only survive if they are able to create new products, new services, more efficient production methods, better and more efficient ways of delivering services, and so on. Public sector organizations, however, are often in a monopolistic position. Citizens often have no choice but to be clients of the public organization in question. It is argued that since the public sector lacks competition, it also lacks incentives to improve and to innovate (Bekkers et al., 2011).

1.1.2 Risk-avoidance

Innovation is risky business. Innovations often come about through a risky process, involving experimentation, trial and error, and uncertain outcomes (Pollitt, 2011; Levitt & March, 1988). Innovation can be seen as a journey which is not linear and rational but which leads to dead-ends, mistakes, setbacks, and obstacles. As a consequence, mistakes and failures are part of any innovation process (Bekkers et al., 2013; Hartley, 2005).

However, bureaucratic and political cultures are often viewed as risk-avoiding cultures. Risk and risk-taking are generally negatively perceived by public sector organizations (Bekkers et al, 2011). The reasons for this are obvious. First of all, government works with public money. It is very hard for politicians and other public office holders to "persuade the media and the public that it is acceptable, in certain contexts and under certain conditions, to spend public money on things that turn out to be failures" (Pollitt, 2011, p. 39).

Secondly, decision-makers and implementers carry responsibility for failure. They are often harshly penalized for failures, both by public accountability mechanisms and by the media (Pollitt, 2011; Gilson et al., 2009). As a consequence, politicians and public managers are cautious to support radical innovations because there is a risk of failure, and hence a risk of getting blamed and penalized. Risk-, error-, and blame-avoidance thus become central characteristics of the public sector: public managers tend to make safe decisions in order to avoid risk and blame (Howlett, 2012; Bernier et al., 2007; Gilson et al., 2009; Bekkers et al., 2011).

1.1.3 Short-termism

A systematic, long-term, and goal-oriented perspective can create a fertile breeding ground for innovation (Drucker, 1985 – In Bekkers et al., 2011). However, public administration is under the influence of the political realm, which does not value long-term progress. Politicians want

quick results in order to safeguard their mandates at the next election (Bekkers et al., 2011). This short-term orientation increases delivery pressures and forces public office holders to minimize risk-taking (Bekkers et al., 2013).

1.1.4 Rule-obsession

The public sector is dominated by a bureaucratic culture in which compliance with rules and procedures is highly valued. And rightly so, because rules and procedures provide legal security and equity, which are important public values. The downside is that rules and procedures can become ends in themselves. They become accepted practices and their purpose is never questioned. When this is the case, these rules and procedures may limit the way in which new concepts, methods, technologies and processes are accepted – in other words, they may impede innovation (Bekkers et al., 2013).

These four characteristics of the public sector are not beneficial to innovation. However, there is no reason for despair. The different strands of research dealing with innovation mention many other potential drivers for innovation. Three important fields of study in this respect are: the body of literature on learning and cognition; the body of literature on systems, feedback, and environment; and the body of literature on accountability (in particular the learning and improving function of accountability).

In the following paragraphs, we will explore and discuss these lines of research. On the basis of this research review, we identify three dimensions which we claim are important for innovation: feedback, accountability, and learning. Moreover, we will develop a list of questions to measure the degree to which feedback, accountability and learning mechanisms are present in public sector organizations and to assess the characteristics of these mechanisms. On the basis of this questionnaire, we will then test whether or not these mechanisms are indeed conducive to innovation and if so, under which circumstances.

2. Learning

Scholars from different research areas have conceptualized learning in different ways.

2.1 Cybernetic system learning: corrective system learning on the basis of feedback

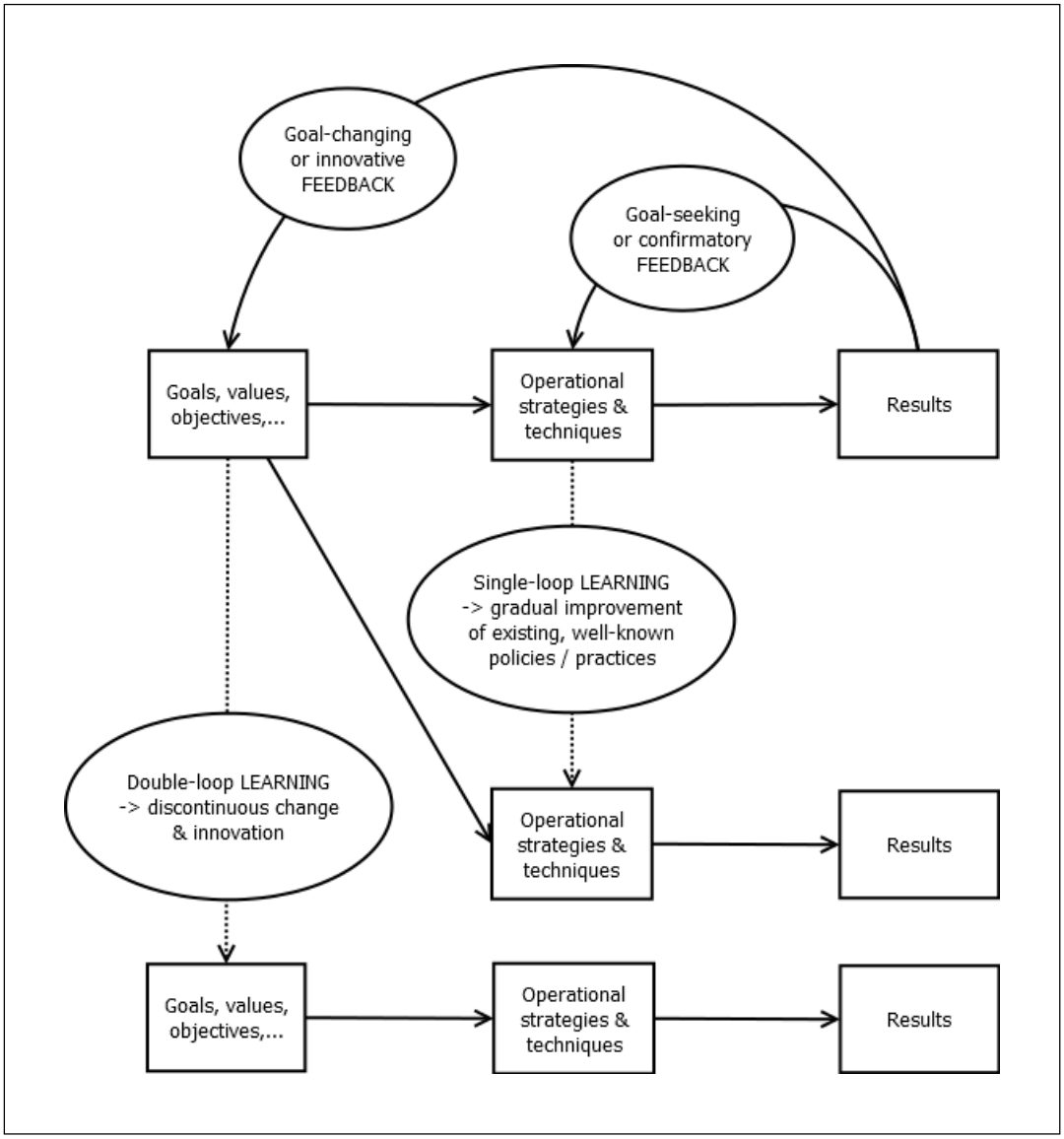
Many authors have looked at learning from a systemic perspective. In his description of cybernetic system learning Peter van der Knaap (1995) refers to, among others: Deutsch (1966), Argyris & Schön (1978), Senge (1992), Ashby (1952), and Fiol & Lyles (1985). According to these authors, a cybernetic system has a specific purpose (e.g. the provision of water). To perform its function, a system needs inputs (e.g. spring water) from its environment, which it subsequently processes into certain outputs (e.g. drinking water and waste). The main principle guiding the cybernetic system perspective, however, is this: the self-steering part of a system is able to detect and correct error; if a system is capable of obtaining feedback information about the outcomes and effectiveness of its actions, it is capable of correcting its errors and improving its overall functioning (Van der Knaap, 1995).

Thus, from the perspective of cybernetic systems, learning refers to the detection and correction of error. At least two levels of learning can be distinguished. Many authors have made this distinction, using different labels. However, the labels used by Argyris and Schön are probably the

most influential. They differentiate between single-loop and double-loop learning (Argyris & Schön, 1978).

Upon the detection of an error, most people look for another operational strategy that will work within the same goal-structure and rule-boundaries. This is single-loop learning. Single-loop learning occurs on the basis of goal-seeking or confirmatory feedback. This kind of feedback does not challenge the purpose of the system: goals, beliefs, values and conceptual frameworks ('the governing values') are taken for granted without critical reflection. The emphasis is on 'techniques and making techniques more efficient' (Usher and Bryant, 1989, p. 87 – in Smith, 2013). Questions that may be asked are: Could we do what we are currently doing in more productive ways, doing it cheaper, using alternative methods or approaches for the same objectives? If an action we take yields results that are different to what we expected, through single-loop learning, we will observe the results, automatically take in feedback, and try a different approach. This kind of learning may lead to the gradual improvement of existing, well-known policies. It solves problems but ignores the question of why the problem arose in the first place (Van der Knaap, 1995; Fiol & Lyles, 1985; Argyris & Schön, 1978).

Figure 1: Single & double loop learning



If we look deeper, however, we may find that what went wrong, did so because of the way the system is designed. Consequently, if we change the system's underlying norms and assumptions, we may be able to prevent the error from happening again. An alternative and more sophisticated response, therefore, is to question the governing variables themselves, to subject them to critical reflection. This is described by Argyris and Schön as *double-loop learning*. Double-loop learning occurs on the basis of goal-changing or innovative feedback. It pertains to the detection and correction of errors in ways that involve the modification of an organization's underlying norms, assumptions, policies and objectives. It may lead to discontinuous change and innovation (Van der Knaap, 1995; Fiol & Lyles, 1985; Argyris & Schön, 1978).

We may, however, reflect even further. We can reflect about what prevented us from seeing that the system needed changing, before something went wrong. Argyris and Schön call this third level of learning 'deutero learning'. It entails an institutionalized capacity to learn (Argyris & Schön, 1978; Bovens, Schillemans & 't Hart, 2008).

2.2 Social learning

The development of mental models and cognitive schemata by individuals does not occur in a social vacuum. The individual's cognitive development is influenced by its social environment. Studied from a social perspective, learning depends on communication. On the basis of shared linguistic notions, people can exchange knowledge and beliefs. When communication is durable, a dialogue or a debate may arise. In a dialectic connection, opinions may be tested and verified, alternative viewpoints may be confronted, and mutual efforts of persuasion and argumentation may be made. In this way, the individuals participating in the dialectic connection are stimulated to reflect on their existing cognitive schemata, which may lead to learning and change (Van der Knaap, 1995).

More still, the confrontation of viewpoints may lead to new viewpoints, transcending the opposition. Indeed, the confrontation of competing theses may result in a dialectical process through which a synthesis may be reached on a higher level (Bekkers et al., 2011).

However, the possibilities of communication, dialogue, confrontation of viewpoints, and learning may be compromised by what Argyris (Argyris, 1987 – in Van der Knaap, 1995) has called 'defensive routines'. Indeed, in order to prevent the experience of embarrassment or threat, people tend to take refuge in defensive routines, which are concealing practices to obstruct the confrontation of viewpoints (Van der Knaap, 1995). When people feel threatened or vulnerable, they often engage in these kinds of defensive routines in order to protect themselves and their colleagues from losing face (Morgan, 2006b).

2.3 Organizational learning

The notion of organizational learning has received ample scholarly attention over the last couple of decades. However, no theory or model of organizational learning has gained widespread acceptance (Fiol & Lyles, 1985; Mariotti, 2012). The term 'organizational learning' is defined in any number of ways, widely differing in scope and focus. Whilst some definitions focus on the learning of individuals in the organizational context, others on the opposite side of the spectrum instead focus on an organization-level process that is distinct from individual learning. In the case of the latter, organizational learning is directly linked to the institutionalization (Knight, 2002; Huysman, 1999) of such concepts as organizational culture, processes and procedures.

Some scholars argue that organizations cannot learn; that only individuals can learn. For example, Weick (1991, p. 119 – in Mariotti, 2012, p. 216) states that "organizations are not built to learn. Instead, they are patterns of means-ends relations deliberately designed to make the same routine response to different stimuli, a pattern which is antithetical to learning in a traditional sense." Simon (1991, p. 125 – in Knight, 2002, p. 432) states that "all learning takes place inside individual human heads." Nevertheless, Simon argues that

> "what an individual learns in an organization is very much dependent on what is already known to (or believed by) other members of the organization and what kinds of information are present in the organizational environment. […] human learning in the context of an organization is very much influenced by the organization, has consequences for the organization and produces phenomena at the organizational level that go beyond anything we could infer simply by observing learning processes in isolated individuals" (Simon, 1991, p. 125-126, in Mariotti, 2012, p. 216).

In other words, Simon, and other scholars sharing this view, believe that the notion of organizational learning deserves scholarly attention. However, they do not see organizational learning as the learning of an organization. They see it as the learning of individuals in an organizational context (Crossan et al., 1995). In this view, organizational learning is seen as the sum of the learning of individual members of the organization (Mariotti, 2012; Knight, 2002).

Other scholars, however, consider organizational learning to be more than the sum of the learning of individuals that constitute the organization. They argue that not only individuals can learn, but organizations as well. For example, Knight (2002, p. 436) argues "that learning is a notion that can be usefully applied at different levels, provided we accept that the detailed conceptualization of learning and associated constructs, such as memory, are not identical across the levels." We might, for example, make the following comparison: Individuals develop mental models that they use as frames of reference to perceive and understand situations and to decide on which courses of action to take. Similarly, organizations develop shared mental models which have an influence on the decisions made by the management, and which guide the problem-solving activities and patterns of interaction among co-workers (Lam, 2006). Hedberg (1981, p. 6) draws another parallel: "Organizations do not have brains, but they have cognitive systems and memories." Lam (2006) defines the collective memory of an organization as "the accumulated knowledge of the organization, stored in its rules, procedures, routines, and shared norms" (Lam, 2006, p. 124).

In this view, organizational learning does not only comprise individuals learning in an organizational context, but also the organization learning through intra-organizational interaction. Identifying organizational learning, however, is tricky business. One tool which enables us to see if organization learning has taken place, is analysing whether cognitive structures and behavioural patterns remain despite personnel turnover (Knight, 2002). Hedberg (1981, p. 6) puts it this way: "Members come and go, and leadership changes, but organizations' memories preserve certain behaviours, mental maps, norms, and values over time."

In short, organizational learning is a popular research topic. However, there is no scientific agreement on what constitutes organizational learning. In particular, the topic seems to suffer from two ailments: disagreement about the appropriate unit of analysis, and definitional confusion between the locus of the learning and the context of the learning. This makes any scientific discussion difficult. However, Knight (2002) has developed a matrix that might

overcome these disagreements. By making the distinction between learner and learning context, the matrix distinguishes conceptually different forms of learning. The rows consist of the various agents of learning (i.e. each row represents a different learner). The columns regard the context for learning. The matrix is an analytical framework that provides the opportunity to map prior research, and consequently, to make the conceptual disagreements discussable (Knight, 2002).

Figure 2: Knight's (2002) organizational learning-matrix

	Context of learning				
Level of learner	*Individual (I)*	*Group (G)*	*Organizational (O)*	*Dyadic (D)*	*Interorganizational (I-O)*
Individual (I)	Individual learns 'alone'	Individual learns within a group	Individual learns within an organization	Individual learns within a dyad	Individual learns within a network
Group (G)	Group's learning is influenced by an individual	Group learns through intragroup interaction	Group learns within an organization	Group learns within a dyad	Group learns within a network
Organization (O)	Organization's learning is influenced by an individual	Organization's learning is influenced by a group	Organization learns through intra-organization interaction	Organization learns within a dyad	Organization learns within a network
Dyad (D)	Dyad's learning is influenced by an individual	Dyad's learning is influenced by a group	Dyad's learning is influenced by an organization	Dyad learns through intradyad interaction	Dyad learns within a network
Network (N)	Network's learning is influenced by an individual	Network's learning is influenced by a group	Network's learning is influenced by an organization	Network's learning is influenced by a dyad	Network learns through intranetwork interaction

Source: Knight, 2002, 438

On the basis of this framework, we can map the rival conceptions of organizational learning that we discussed in the previous paragraph. In this study, we will regard organizational learning as the combination of individuals and groups learning in an organizational context, and the organization learning through intra-organizational interaction.

2.3.1 Organizational learning is a social affair

Starting from this definition, organizational learning can be regarded as a social accomplishment, emergent from the interactions of organizational actors. Organizational learning takes place in networks of relationships between individuals, groups, and organizational actors. It is a collective accomplishment (Mariotti, 2012). According to this view, organizational learning is situated in the relational activities of actors: social processes are crucial in the formation of collective cognition and knowledge structures; social interactions and group dynamics within organizations are decisive factors in the shaping of collective intelligence, learning, and knowledge generation (Lam, 2006). Organizations are seen as consisting of groups of individuals that collectively try to make sense of a complex reality in their daily work activities (Brown & Duguid, 1991).

2.3.2 Exploitation, exploration and organizational survival

Scholars in the research area of organizational learning have also examined how shared interpretative schemes affect the adaptive potential of organizations. According to Lam (2006), some scholars have claimed that collective mental models facilitate an organization's capacity to process and interpret information in a coherent and purposeful manner, and to share knowledge. In this manner, shared mental models are expected to aide learning and joint problem solving and, hence, to enhance the adaptiveness of organizations (Lam, 2006).

However, as Lam (2006) indicates, other scholars have argued that shared mental models can create "blind spots" in organizational decision making and impede organizational change. They argue that organizations tend to persist in what they do because everyone in the organization has the same set of beliefs and values, and because it occurs to no one to question the existing ways of doing things. As a consequence, organizations may find it difficult to unlearn these deeply rooted practices and to explore alternative ways of doing things (Lam, 2006).

Therefore, these authors suggest that there should be a sound balance between the exploitation of existing knowledge and competences, on the one hand, and the exploration/integration/ insertion of new ideas, knowledge, expertise and competences from outside the organization, on the other.

Exploitation, according to Holmqvist (2003, p. 99) refers to the refinement of existing organizational knowledge and capabilities. Exploitation is about creating reliability in experience. It means productivity, refinement, routinisation, production, and elaboration of existing experiences. The exploitation of existing knowledge and competences may enable organizations to recombine existing knowledge and generate new applications from its existing knowledge base. This will most likely result in cumulative learning, which is continuous but incremental (Lam, 2006). At the same time, however, these learning processes can also result in a "simple-mindedness and a concomitant inability to explore new opportunities" (Holmqvist, 2003, p. 99).

These drawbacks, caused by exploitation, will need counteraction. Organizations will need to create variety in their experiences as well, by experimenting, innovating and taking risks. This is the so-called process of exploration (Holmqvist, 2003). The inflow of new knowledge and ideas may enable organizations to generate radical new products and processes. Sources from outside the organization are often thought to be in a better position to challenge existing perspectives and paradigms (Lam, 2006). In addition, Foldy (2004) argues that cultural diversity in an organization's workforce enhances organizational performance. Indeed, alternative and new ideas and perspectives can be generated by culturally heterogeneous groups, who contribute to functional diversity.

In the literature, a binary divide is made between intra-organizational learning processes on the one hand, and inter-organizational learning processes on the other. Where the former process favours exploitation, the latter favours exploration. The reason for this division may be found in the presence or absence of a dominant group. Intra-organizational learning is typically controlled by a dominant group, which has the power to select, promote, demote and dismiss organizational members. This situation tends to result in a status quo of organizational worldviews, norms, traditions, and rules (Holmqvist, 2003).

Inter-organizational learning, on the other hand, has been claimed to be of a highly innovative and explorative character, because this type of learning has the potential to share somewhat different experiences between the learning entities (Holmqvist, 2003). Inter-organizational collaborations may enable formal organizations "to increase their store of knowledge not previously available within the organization" (Huber, 1991, p. 97 – in Holmqvist, 2003, p. 104). They provide "a shortcut to radical change, by-passing organizational vicious circles and deadlocks" (Ciborra, 1991, p. 59 – in Holmqvist, 2003, p. 104).

2.3.3 Tacit and explicit knowledge, knowledge conversion, and knowledge management

Knowledge management lies somewhat outside the field of organizational learning itself, but is very closely connected to it and critical for how organizational learning can operate. Knowledge management is the set of processes and practices by which knowledge is recognized, acquired, captured, codified, recorded, stored, aggregated, communicated, shared, transferred, converted, retrieved and reaccessed (Rashman et al., 2005; Gilson, Dunleavy & Tinkler, 2009; Levitt & March, 1988).

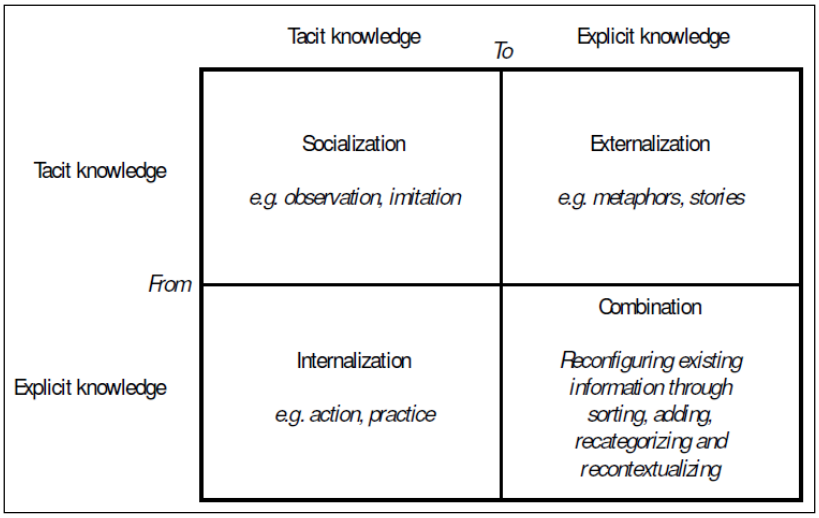
Before we can elaborate on this, we need to discuss the conceptual distinction made, among others, by Polanyi (1966) and Nonaka (1994) between tacit and explicit knowledge (Hartley & Allison, 2002; Rashman et al., 2005). Explicit knowledge can be articulated, codified and transmitted using formal systems (e.g. language and mathematics) and captured in language-based records (such as those in libraries, archives and databases). Tacit knowledge is personal, contextual, and often embedded in practice (concrete know-how, crafts and skills that apply to specific contexts), making it difficult to articulate and harder to share through formal language systems. The transfer of knowledge is dependent on close social interaction (Hartley & Allison, 2002; Rashman et al., 2005).

Hartley & Allison (2002) give us four modes of knowledge conversion through which tacit and explicit knowledge can be created and transferred between individuals and groups:

- **Socialization** is the process of converting tacit knowledge (known by one person or group) to tacit knowledge (held by another person or group). It is a process of sharing experiences and thereby sharing tacit knowledge, such as shared mental models and technical skills. It includes the processes of observation and imitation.
- **Externalization** is the process of articulating tacit knowledge into explicit concepts and ideas. The conversion process can be enhanced through dialogue and reflection. The use of metaphors and analogies, the telling of stories and anecdotes, the contrasting of situations and contexts can help explicit concepts to emerge from tacit knowledge.
- **Combination** is the process of systematizing concepts into a knowledge system and it occurs through combining and converting different forms of explicit knowledge. Such knowledge can be diffused and learnt (at least in its explicit form) through reconfiguring existing information, analysing, combining and recategorizing. Databases are an example of the combination of explicit knowledge.
- **Internalization** is the process of converting explicit to tacit knowledge. This process tends to be achieved through practice, by simply 'having a go at it'. Manuals and other documentation of, for example, project evaluation can help to embed tacit knowledge, however, the 'embodiment' of knowledge through action is critical.

Both tacit and explicit knowledge are crucial for the functioning of an organization. Routine-based conceptions of learning presume that practical knowledge, whether in implicit form or in formal rules, is recorded, maintained and accumulated in an organizational memory through rules, procedures, routines, and shared norms. The biggest obstacle for this documentation to happen efficiently and effectively is the turnover of personnel and passage of time (Levitt & March, 1988).

Figure 3: Tacit and explicit knowledge conversion



Source: Hartley & Allison, 2002, 105 (adapted from Nonaka, 1994, 19)

Unfortunately, the conversion of tacit knowledge known by one person or group to tacit knowledge held by another person or group (socialization) is often resource-intensive, slow and individualized. Fast-changing environments can be problematic for such a pace of learning in organizations (Gilson, Dunleavy & Tinkler, 2009; Hartley & Allison, 2002). Consequently, the question of how knowledge can be more formally collected and stored in retrievable ways by and within organizations has attracted widespread attention.

2.3.4 Organizational learning as a combination of cognition and behaviour

In an effort to synthesize previous models and theories of organizational learning, Fiol and Lyles (1985) suggest that "learning is the development of insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions" (Fiol & Lyles, 1985, 811). More precisely, they conceive learning as a dynamic relationship between cognitive and behavioural development (see also: Crossan et al., 1995).

With the cognitive dimension of learning, Fiol and Lyles refer to the development of insights and cognitive associations, and to changes in the states of knowledge of organizations. Insights and causal associations are developed via the filtering, interpretation, and processing of raw information about past actions and performance. This information is thus translated into concrete lessons for the future, lessons concerning causes of and possible solutions to problems (Dekker & Hansén, 2004). The behavioural dimension comprises changes in terms of behavioural and organizational outcomes. Not just any change however. It refers particularly to those adaptations that reflect the knowledge, insights and cognitive associations that have been developed (Fiol & Lyles, 1985). It refers to the institutionalization of the lessons learned.

It should be noted, however, that learning is not a set, linear process in which behavioural change is always preceded by cognitive developments and in which cognitive developments are always followed by behavioural changes (Fiol & Lyles, 1985; Dekker & Hansén, 2004). This means two things. First, new insights and ideas are not always turned into new practices. Assessments may be challenged, what is learned may be ignored, or the pressures on the system may not be sufficient to bring about changes (Aucoin & Heintzman, 2000). Second, changes in behaviour may occur without any preceding cognitive development. However, those behavioural changes may sometimes give rise to a growing awareness about the effectiveness of those changes. To put it in

the words of Crossan, Lane and White: ''understanding guides action, but action also informs understanding'' (Crossan, Lane & White, 1999, 524).

2.4 Enabling factors for public sector learning

It is important to understand the major factors that can enable organizational learning and the ones that can inhibit it. Numerous factors have been identified by the literature as potential enablers/inhibitors of organizational and inter-organizational learning. In Table 1 a selection of factors is provided. This selection is an adaptation of and addition to the typology of factors developed by Greiling & Halachmi (2013). Greiling & Halachmi, in their turn, based their typology on the work of Popper & Lipshitz (2000); Barrados & Mayne (2003); Friedman, Lipshitz & Overmeer (2003); Rashman, Withers & Hartley (2009).

Table 1: Factors enabling organizational learning

Environmental enablers (external to the learning entity)	Environmental uncertainty	
	Amount of competition	
	Amount of (public) pressure for innovation and modernization	
	Regulatory obligations	
	Legal constraints and ethical issues	
	Costs and salience of potential errors	
Political enablers	Top management endorsement and commitment to organizational learning	
	Top management inducement of organizational learning culture	
	Strategic thinking	
Cultural enablers (organizational learning values/culture)	Transparency: honest and unbiased information disclosure	
	Integrity and issue orientation: collecting and providing information and making judgments regardless of its implications, regardless of interests, status, personal likes, etc.	
	General openness that encourages questioning, inquiry and constructive criticism	
	Openness for feedback information, for alternative opinions and perspectives	
	Tolerance for uncertainty: allowing cognitive dissonance	
	Tolerance for errors	Sense of safety about making errors and discussing them openly
		No-blame culture, trust-based culture
	Egalitarianism: power-sharing, participation, equal responsibility for performance, regardless of formal status (cf. TQM)	
Institutional learning conditions: structural and procedural arrangements that allow organizations to collect, analyse, store, disseminate and use	Credible measurement and analysis	Deliberate measurement practices: active measurement of a wide spectrum of performance
		Useful analysis
		Data quality assurance practices
	Information dissemination: widespread and timely communication of result information, in useful formats	

information and knowledge	Regular review	Practices for routine review of accomplishments
		Procedures for follow-up of decisions taken
	Internal platforms, arenas, forums to discuss and debate	
	Knowledge management	Making tacit knowledge explicit
		Recording, conservation and retrieval of knowledge and experience
		Creating, acquiring, capturing, aggregating, codifying, sharing and using knowledge
	Organizational memory	Archives
		Documentation of procedures
Organizational structure	Bureaucratic structure – adhocracy – J-form	
	Degree of autonomy/Distance from politics: Department – central agency – more autonomous agency	
Organizational capacity	Organizational slack (people, money, time, competences, information, knowledge, political support, contacts)	
	Large variety of relevant skills and knowledge that can be exploited	
	Personnel turnover	

3. Systems, feedback, and environment

Open vs. closed systems

In "An outline of general system theory", Ludwig von Bertalanffy (1950) makes the fundamental distinction between open and closed systems:

> "We call a system closed when no materials enter or leave it. It is open if there is inflow and outflow, and therefore change of the component materials" (von Bertalanffy, 1950, p. 155).

According to von Bertalanffy, the conception of an open system is more general than that of a closed system. Indeed, one can conceive a closed system as an open system in which the transport terms have been equated to zero. The opposite, however, is not possible (von Bertalanffy, 1950).

Closed systems are stationary. They are in a state of equilibrium, which means that their composition remains constant throughout time. An open system on the other hand, *may* attain a stationary state, but only if certain conditions are met. If this is the case, the composition of the system is not constant. The system appears to be constant, but this steady state is maintained by a continuous exchange of materials with the environment (von Bertalanffy, 1950).

Many biological and social systems can be characterized as open systems, while many physical and mechanical systems can be characterized as closed systems. However, the distinction between open and closed systems is not a dichotomous one, it is a continuous one. Indeed, the degree of openness can vary. For example, some open systems may be responsive only to a relatively narrow range of inputs from the environment (Morgan, 2006a).

3.1 The "open systems approach" to organization: the organism metaphor

Introduction

The open systems approach is based on the principle that organizations are, just like biological organisms, open to their environment and that – in order to survive – they must achieve an appropriate relation with that environment; they must interact with it and they must adapt to it. A closed system, by contrast, is not dependent on its environment. It is autonomous, insulated, and sealed off from its environment (Morgan, 2006a; Katz & Kahn, 1978; Daft, 1995).

In more traditional management and organizational theories and studies, relatively little attention was given to the environment. Organizations were predominantly viewed and treated as closed mechanical systems. The environment was assumed to be stable and predictable and not to interfere with the functioning of the system. Attention was focused on principles of internal design with a focus on effectiveness and efficiency (Morgan, 2006a; Katz & Kahn, 1978; Daft, 1995).

In other words, the closed-system approach ignored the importance of the environment to the functioning of human organizations. It was preoccupied with principles of internal design and internal organizational functioning. Consequently, it failed to understand the processes of feedback which are essential to survival (Morgan, 2006a; Katz & Kahn, 1978; Daft, 1995).

In the open systems approach, much attention is devoted to the relationship between the organization and its environment. A dominant principle is that organizations have to adapt themselves to their environments if they are to survive. Organizations have to align with their environments to remain competitive and innovative. Alignment implies that the firm must have the potential to learn, unlearn or relearn based on its past behaviours. It can be argued that organizational adaptation is the essence of strategic management: when it comes to dealing with changes occurring in the environment, Fiol & Lyles (1985) stress that this should be the key focus, and that it involves the continuous process of making strategic choices (Fiol & Lyles, 1985).

The principle of organizational adaptation is also reflected in contingency theory. This theoretical current asserts that there is no one ideal way of organizing. The appropriate form depends on the kind of task or environment with which one is dealing (Morgan, 2006a).

The concept of an open system

An open or organic system is continuously engaged in an exchange of materials and/or energy with its environment. This interaction is crucial for the survival of the system, and for maintaining the so-called steady state. The open system is, more precisely, engaged in a continuous cycle of input, internal transformation (throughput), output, and feedback: inputs from the environment (materials and/or energy) are transformed into some product, which is then exported into the environment, after which the system recharges itself with sources in the environment (Morgan, 2006a; Katz & Kahn, 1978).

Open systems share a number of characteristics: negative entropy, feedback, homeostasis, requisite variety and equifinality. (1) Closed systems are entropic. This means that they have an irreversible tendency to degenerate and decay. Open systems, on the other hand, try to counter these entropic tendencies by importing energy from their environments. The law of negative entropy posits that systems survive and maintain their steady states as long as they import more energy from the environment than they consume (Morgan, 2006a; Katz & Kahn, 1978). (2) The feedback principle has to do with information input, which is a kind of signal to the system about

environmental conditions and about the functioning of the system in relation to its environment. Such information constitutes feedback, which enables the system to correct for its own errors or for changes in the environment, and thus to maintain a steady state or homeostasis. (3) The concept of homeostasis refers to the self-regulating processes through which the inflow and outflow of materials and energy in organic systems is kept in balance. In other words, it refers to the ability to maintain a steady state (the ability to maintain life and form). These processes operate on the basis of negative feedback, implying that deviations from a certain set standard initiate corrective actions aimed at reducing the deviation (Morgan, 2006a; von Bertalanffy, 1950; Katz & Kahn, 1978). (4) The principle of requisite variety asserts that – in order to be adequate and appropriate – the internal regulatory mechanisms of a system must be as complex and diverse as the environment with which it has to deal (Morgan, 2006a, 2006b). (5) The principle of equifinality builds on the idea that an open system can arrive at the same end state from different initial conditions, with different resources, and by different paths of development (Morgan, 2006a; Katz & Kahn, 1978).

Open systems are also regularly characterized in terms of interrelated subsystems. For example, an organization can be anatomized into organizational divisions, which in their turn, consist of smaller groups or departments, each of which contains individual human beings. If we interpret the whole organization as the system, then the other levels can be understood as subsystems, knowing that each subsystem in itself can be perceived as a complex open system in its own right (Morgan, 2006a).

The organization as an open system

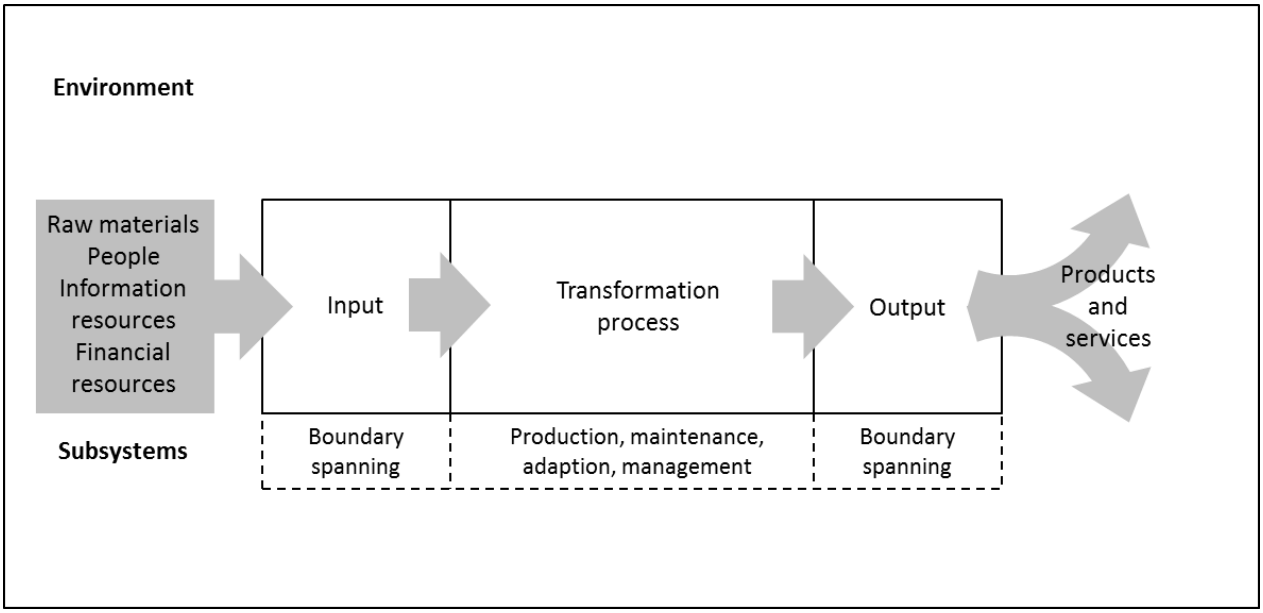
Figure 5 is a schematic representation of an open system. In the context of public sector organizations, the inputs include raw materials, human resources, information and financial resources. In the transformation process, these inputs are transformed into something of value which can be exported back to the environment. In the context of public sector organizations, examples of valuable outputs are products and services for citizens and customers. Apart from valuable outputs, the transformation process can also create and export undesired by-products such as pollution to the environment (Daft, 1995).

An organization is composed of several subsystems. The specific functions required for organizational survival are performed by several interrelated subsystems. In an organization, these subsystems may be called departments. Daft distinguishes between five essential functions which can be performed by organizational subsystems:

- Boundary spanning: boundary spanning subsystems are responsible for exchanges with the environment; they handle input and output transactions;
- Production: the production subsystem is responsible for the transformation process;
- Maintenance: the maintenance subsystem provides supportive functions that enable the organization to run smoothly; examples are the personnel department and the janitorial staff;
- Adaption: the adaptive subsystem is responsible for organizational change, adaptation and innovation; in order to do this, it scans the environment for problems and opportunities;

- Management: the management subsystem is responsible for providing direction, coordination, strategy and goals for the other subsystems.

Figure 4: Open System



Source: Daft, 1995, 12

These subsystems are interconnected and often overlap. Departments may have multiple roles (Daft, 1995).

Structural contingency theory

General

According to Lam (2006), the classical theory of organizational design assumed the idea of 'one best way to organize'. This assumption was challenged by the contingency theory, which came to prominence during the 1960s and 1970s. Contingency theory argues that the most suitable structure for an organization is the one that best fits the relevant contingencies, such as the nature of the task or the environment with which the organization is dealing. Consequently, contingency theory is preoccupied with investigating the links between the nature of the task, the environment, structures and organizational performance (Lam, 2006; Morgan, 2006a.). Following Lam (2006), we discuss two important early contributions to contingency theory.

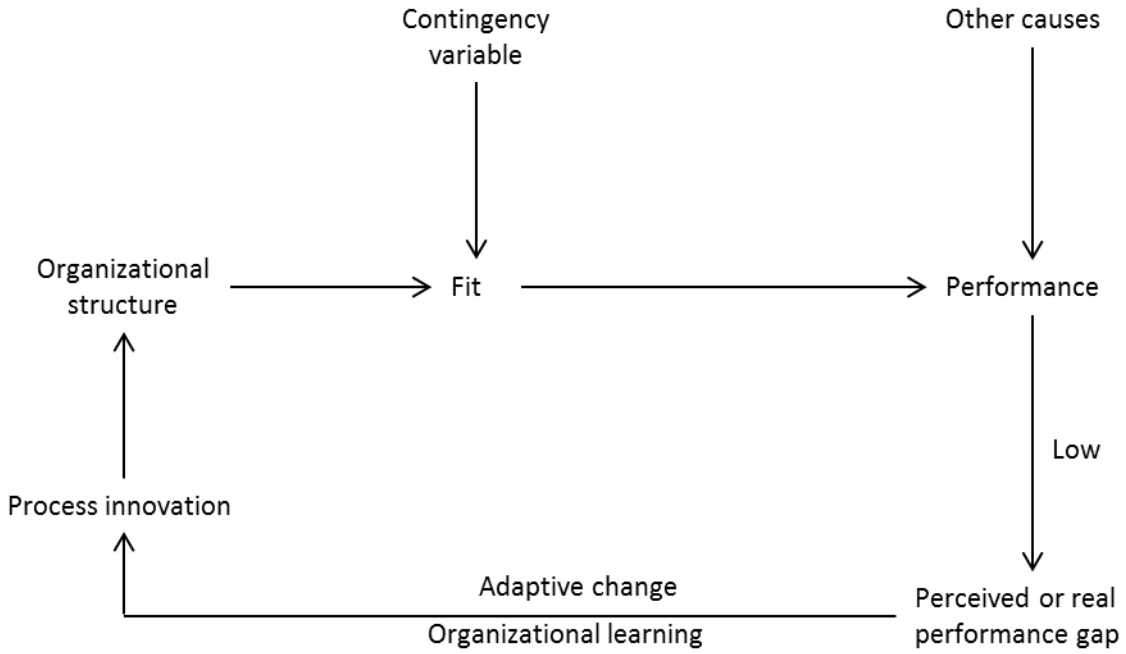
A study of Burns & Stalker (1961) found that firms could be categorized in two main types: 'mechanistic' and 'organic' organizations. Mechanistic organizations are typically rigid and hierarchical. They are characterized by: task specialization and functionally differentiated duties; precise definition of rights and obligations; a hierarchical structure of control, authority and communication; concentration of knowledge at the top of the organization. The study of Burns & Stalker found that this type of organization is well suited to stable and predictable conditions. Organic organizations, on the other hand, are typically more fluid in their structures and procedures. They are characterized by: continual adjustment and redefinition of individual tasks and duties; a network structure of control, authority and communication; knowledge may be located anywhere in the network. This type of organization is said to be better suited for environments characterized by rapid change and high complexity (Lam, 2006).

In 1979, Mintzberg proposed a series of organizational archetypes: simple structure, machine bureaucracy, professional bureaucracy, divisionalised form, and adhocracy. He argued that successful organizations design their structures to accommodate their environments. According to Mintzberg, bureaucratic structures work well within stable environments, but are not innovative and cannot cope with novelty or change in the environment. Adhocracies, by contrast, are highly organic and flexible forms of organization and are capable of radical innovation in a volatile environment (Lam, 2006).

Structural contingency theory and innovation

At the centre of contingency theory is the notion of 'fit'. The theory asserts that an appropriate fit between organizational structure and key contingencies will lead to higher performance. Innovation may assist at achieving this fit by adapting structures to new circumstances. Figure 6 shows Donaldson's (2001) 'structural adaptation to regain fit' model, edited by Walker (2013) to include innovation.

Figure 5: 'Structural adaptation to regain fit'-model



Source: Walker, 2013, 18

In accordance with structural contingency theory, the figure suggests that the fit or misfit between organizational structure and contingency influences the level of performance. When key contingencies change while the organizational structure remains unchanged, this will result in misfit, which may lead to reduced levels of performance. In order to restore performance back to acceptable levels, the organization has to adapt: it has to change its structure in order to accommodate the changed contingencies and to bring the organization back into fit (Walker, 2013).

The basic dynamics of search and change

According to Downs (1967), organizational change is closely related with information seeking. He sets forth a basic model of search and change for both individuals and organizations. For our

purposes, we will focus on the level of the organization. The basic model is a theory of dynamic equilibrium involving the following hypotheses:

- All organizations are continuously engaged in scanning their immediate environment to some degree. They constantly receive a certain amount of information from their environments. This stream of information comes to them without specific effort on their part to obtain it. This constitutes a minimal degree of constant, 'automatic' search.
- Each organization sets a level of performance it aspires to achieve. Organizations can choose different aspiration levels. A wide range of internal and external pressures will play a role in determining the aspiration level.
- Whenever the performance level of the organization drops below the aspiration level, the organization will be motivated to search more intensively for alternative ways of organizing its business. Indeed, the perceived performance gap creates dissatisfaction, which incites the organization to intensify its normal search and to direct it specifically at alternatives likely to close the performance gap. Other things being equal, the organization will select the alternative that involves the least profound change in its structure.
- Once the organization has adopted a new course of action, enabling it to regain or surpass its original performance level, it will reduce its search efforts back to their normal, automatic degree of intensity.
- If the intensified search fails to reveal any ways the organization can return to its original level of performance, the organization will eventually adjust its aspiration level downwards, to the highest level of performance it can attain.
- When an organization is achieving its aspiration level, it is in a state of equilibrium. The organization is maximizing its utility in the light of its existing knowledge. The organization is not motivated to search for alternative ways to organize its business.
- There is only one exception, namely when the constant, automatic search process by chance reveals an alternative that might allow the organization to move to an even higher level of performance. This possibility creates a potential performance gap and motivates the organization to explore this alternative. If the intensified search reveals that the organization can indeed improve its performance by shifting to the alternative, the organization will make the shift. Once the organization has adopted the new course of action, the new higher performance level will be regarded as the aspiration level.

3.2 Autopoiesis and the (relatively) closed nature of systems

Introduction

The idea of an organization as an open system which is in constant interaction with its environment, was challenged by the theory of autopoiesis. The term autopoiesis was introduced by two biologists, Humberto Maturana and Francisco Varela (Arnoldi, 2006). They posit that all living systems are closed, autonomous, and insulated, and make reference only to themselves. The ultimate aim of these systems is to (re)produce themselves (Morgan, 2006c). Although Maturana and Varela have strong reservations about applying the theory of autopoiesis to the social world, their work has had a profound influence on social and organizational studies.

The body of literature about organizations devotes considerable attention to the boundaries of organizations. Organizations have boundaries which are easily or less easily penetrable. This permeability may refer to the entry and exit of persons, but more often it refers to the receptivity of the organization towards signals from the environment (de Bruijn & ten Heuvelhof, 1991).

Receiving and filtering information from the environment

Each organization has a management or perception filter that receives and filters signals from the environment. Open systems have a rather thin filter, allowing many external signals to enter the organization, while closed or autopoietic systems have a very thick filter, allowing only a limited amount of external signals to penetrate into the organization. More precisely, signals from the environment will only be perceived by an autopoietic organization when they relate to the internal frame of reference of the organization. In other words, autopoietic systems are not oriented towards their environments, they are oriented towards themselves. They make reference only to themselves. They respond only to impulses which are consistent with their own frames of reference (de Bruijn & ten Heuvelhof, 1991). Easton (1965) denoted this tendency of self-referral and relative closedness as an orientation towards *withinputs*, instead of towards inputs and feedback from the environment.

Katz & Kahn (1978) denote this process as the coding process: "Any system that is the recipient of information, […] has a characteristic coding process, a limited set of coding categories to which it assimilates the information received" (Katz & Kahn, 1978, p. 433). These coding categories determine which types of information will be selected as relevant and how they will be perceived, interpreted and transformed.

Thus, organizations have their own filters and coding systems that determine the amount and types of information they receive from their environment and the way the information will be perceived. However, within the organization, the different subsystems with their different functions will also have their own, (slightly) different frames of reference and ways of thinking. Therefore, each subsystem will respond to the same information in different ways. Consequently, within an organization, there may be problems of communication and interpretation between subsystems (Katz & Kahn, 1978).

Advantages of relative closedness

According to the open systems approach, organizational closedness is detrimental to the survival odds of the organization. Indeed, the open system approach asserts that, in order to survive, an organization has to adapt itself to its environment. However, as de Bruijn & ten Heuvelhof (1991) indicate, relative closedness can have advantages as well. Being in a state of relative closedness allows an organization to shield itself from excessive turbulence and complexity from its environment, and to reduce the insecurity associated with it. Without this kind of shielding, the organization would react to every single impulse. The resulting overload could cause the organization to drift or even to disintegrate (de Bruijn & ten Heuvelhof, 1991).

Similarly, unrestricted communication between the subsystems of an organization may produce noise and overload in the system. An organized state of affairs may require the introduction of constraints and restrictions to reduce random and diffuse communication between subsystems (Katz & Kahn, 1978). Thelen (quoted in Katz & Kahn, 1978, p. 430-431) summarizes Ashby (1952) to make this point: "Stability of the suprasystem would take infinitely long to achieve if there were 'full and rich communication' among the subsystems […]. If communication among subsystems is restricted or if they are temporarily isolated, then each subsystem achieves its own stability with minimum interference by the changing environment of other systems seeking their stability."

Alteration of opening up and closing off

The degree of closedness/openness of an organization is not necessarily static. It can fluctuate during the life course of the organization. For the purpose of innovation or adaptation, an organization may choose to be relatively open for a while in order to take in new information from its environment. In the aftermath, the organization may require a period of relative closedness in order to reduce the level of uncertainty. In this view, a periodic alternation of opening up and closing off may be seen as healthy for an organization (de Bruijn & ten Heuvelhof, 1991).

3.3 Feedback

In "An outline of general system theory", Ludwig von Bertalanffy (1950) defines feedback as follows:

> "Feed-back means that from the output of a machine a certain amount is monitored back, as 'information', to the input so as to regulate the latter and thus to stabilize or direct the action of the machine" (von Bertalanffy, 1950, p.159-160).

Cybernetic models of self-regulation

The term 'cybernetics' was first used in the 1940s by MIT mathematician Norbert Wiener. The term is used to refer to processes of information exchange, including in particular negative feedback, which enables systems (such as machines and organisms) to self-regulate their behaviour and to maintain a steady state. The concept of negative feedback is closely related to the detection and correction of error: when a system exceeds certain specified limits, it will automatically initiate corrective action to maintain a desired outcome (Morgan, 2006b).

Most cybernetic models of self-regulation are driven by the philosophy of a dual process system which involves a higher order mechanism that monitors and controls a lower order mechanism. We can illustrate this by referring to the functioning of a thermostat. The thermostat (the higher order) mechanism, monitors the temperature in a room and is programmed to initiate a heating mechanism (the lower order mechanism), if and when the temperature drops below a set lower limit, and to stop the heating mechanism if and when the temperature rises above a set upper limit (Wang & Mukhopadhyay, 2012).

Thus, according to Morgan (2006b), any cybernetic system is based on four key principles:

1. The capacity to monitor significant aspects of the environment
2. The ability to relate this information to the operating norms/standards/reference values
3. The ability to detect significant discrepancies between the current state and the norm
4. The ability to initiate corrective action in order to reduce the discrepancies

Similarly, Porter, Lawler & Hackman (1975) (in Katz & Kahn, 1978) specify four basic elements as critical:

1. Standards or specified objectives
2. Monitoring devices to measure current performance
3. Comparing devices to compare actual performance with stated objectives
4. Action devices to reduce possible discrepancies between objectives and actual performance

The simplest cybernetic systems, such as house thermostats, can only correct deviations from the operating norms. They are unable to question the appropriateness of the operating norms themselves. More complex cybernetic systems are able to detect and correct errors in the operating norms. In other words, they are able to influence the standards that guide their behaviour (Morgan, 2006b). It is this kind of self-questioning ability that constitutes the fundamental distinction between single-loop and double-loop learning discussed earlier:

- Single-loop learning: the ability to detect and correct error in relation to a given set of operating norms
- Double-loop learning: the ability to question the relevance and appropriateness of the operating norms

The organizational locus of informational subsystems

As indicated in previous paragraphs, feedback information about the performance of the system in relation to its environment is crucial for the survival of the system and for the upholding of its performance levels. According to Katz & Kahn (1978) two questions are crucial. The first question is: who gathers the feedback information? Katz & Kahn (1978) make the argument that it is important to have a specialized information subsystem which has information gathering as its sole or major task. The second question is: to whom should the information be reported?

The question of a specialized information subsystem

According to Katz & Kahn (1978), information gathering – especially the gathering of information regarding the system as a whole and its relations to the environment – is best assigned to a specialized subsystem for which information gathering is its major or its only responsibility. The opposite would entail a number of disadvantages. One could, for example, assign the information gathering task to an existing substructure, whose primary function is non-informational. According to Katz & Kahn (1978), this would be unwise because the primary task of the substructure would determine the types of information that would be received and the way they would be processed. Moreover, the members of the substructure are not necessarily expert in the subject about which information is sought, nor are they necessarily trained in research procedures (Katz & Kahn, 1978).

With a specialized informational subsystem, these problems may be avoided. However, other problems may arise. For example, top management directives may hamper the freedom of the subsystem and may narrow the receptivity of the subsystem down to only certain types of information. To avoid these kinds of dysfunctions, Katz & Kahn (1978) argue that it is necessary to grant the information subsystem a number of freedoms, similar to the freedoms a university researcher would enjoy. Most notably, top management should not pose specific questions to which they expect answers. Indeed, the answers provided could easily be influenced by the questions asked (Katz & Kahn, 1978).

The question of the optimal locus for reporting

Katz & Kahn (1978) argue that information which has direct relevance for the functioning of the system as a whole should be reported to the top echelons of the organization. However, they recognize that it is often difficult for top managers to find the time to absorb the information and to translate it into adequate decisions (Katz & Kahn, 1978).

3.4 Feedback for public sector organizations: typologies

The source of the feedback

Feedback information about the performance of an organization may come from

1. The staff of the organization
2. The stakeholders of the organization (clients/customers/citizens, partners,…)
3. Monitoring systems
4. Actors engaged in policy evaluation
5. Ombudsmen, audit offices and other (administrative) accountability mechanisms

The staff of the organization

There are many ways the staff of an organization can provide feedback information to the management of the organization. Staff members may be required to report to their managers about what they have done, what their co-workers have done, about their problems and the problems of their unit, and about what they think needs to be done to overcome these problems. However, since this kind of information is often utilized for control purposes, there are great constraints on the free flow of upward communication. Staff members do not tend to give information to their managers that might put themselves or their co-workers in a bad light. They will only tell the boss what they want the boss to know (Katz & Kahn, 1978).

It has been argued that the more control is exercised through pressure and sanctions, the less adequate the flow of information up the line will be. Indeed, pressure and sanctions make people feel threatened or vulnerable. When people feel threatened or vulnerable, they often take refuge in defensive routines to protect themselves and their colleagues from losing face. They will try to conceal errors and problems because the surfacing of these issues might put them in a bad light. They will engage in impression management and window-dressing techniques to make situations look better than they actually are. They will fail to report deep-rooted problems (Morgan, 2006b).

The stakeholders of the organization

In the private sector, sales and profits are important indicators for the performance of the organization. Public sector organizations, however, are often in a monopolistic position. Citizens often have no choice but to be clients of the public organization in question. Consequently, the market share or the number of provided services is not a good indicator for the performance of the organization. A better indicator is the customer's satisfaction with and appreciation of the provided service. Customer satisfaction surveys may provide this type of feedback information. But also complaint management systems may provide insight into the areas of satisfaction or dissatisfaction of the customers.

Monitoring systems

Performance measurement or monitoring refers to the collecting of information about selected aspects or factors in the context of policy and management. The process of monitoring has a systematic and continuous character. Information is systematically gathered by means of periodic measurements. Thus, monitoring can be a permanent source of information for managers and policymakers. However, it offers only descriptive information. Monitoring systems can report how

well the current operations may be working, but it cannot explain the reasons for the success or failure (De Peuter, 2011).

Katz & Kahn (1978) refer to a particular kind of monitoring, which they label 'operational feedback'. They define operational feedback as "systematic information getting that is closely tied to the ongoing functions of the organization and is sometimes an integral part of those functions" (Katz & Kahn, 1978, p. 455). For example: keeping record of the number of produced units. This kind of information is generated by the operational unit involved and it flows back directly to that same unit. The major function of operational feedback is similar to the negative feedback function of the higher order mechanisms that keep cybernetic systems on course. In other words, it rings alarms when the actual performance deviates from the norm. The major limitation of operational feedback is that it can only report on how well the current operations may be working, but it cannot explain the reasons for their success or failure (Katz & Kahn, 1978).

Policy evaluation

Evaluation can be defined as "the systematic and objective determination of the worth or merit of an object" (Scriven, quoted in De Peuter, 2011, 112) or as "a structured process that creates and synthesizes information intended to reduce the level of uncertainty for stakeholders about a given program or policy. It is intended to answer questions or test hypotheses […]" (McDavid & Howthorn, quoted in De Peuter, 2011, 112).

Thus, unlike monitoring, evaluation is capable of answering how and why questions and of finding relations and giving explanations. It possesses specific techniques and approaches to answer these kinds of questions (De Peuter, 2011).

De Peuter (2011) argues that often, monitoring and evaluation are complementary. For example, the policy evaluation process may determine which types of information are needed in order to answer the questions asked. In these cases, monitoring systems may prove to be important sources of information (De Peuter, 2011).

Whereas monitoring has a systematic and ongoing character, policy evaluations are mostly ad hoc events (De Peuter, 2011).

Ombudsmen reports and (performance) audits

Just like policy evaluations, ombudsmen reports and performance audits may provide public sector organizations with feedback information about important performance dimensions. However, there are important differences between policy evaluation on the one hand and ombudsmen and audit offices on the other.

Desomer, Put & Van Loocke (2013) and D'hoedt & Bouckaert (2011) address these differences. First and foremost, policy evaluations are generally performed in a client-contractor relationship. This has important consequences for the independence of the evaluator. Since most policy evaluations are executed at the request of the client (often the government or the administration), the evaluator's independence is often limited by the *terms of reference* (scope of the research, research questions, norms and standards, etc.) formulated by the client. Furthermore, it may be harder for the evaluator to obtain access to sensitive documents. Not to forget, the client is the owner of the evaluation report and can therefore decide not to make the report accessible to the public (D'hoedt & Bouckaert, 2011; Desomer, Put & Van Loocke, 2013).

Ombudsmen and audit offices, on the other hand, perform their activities in a context of public accountability. More precisely, ombudsmen and audit offices are often charged by a political principal (parliament or the government) to exercise some kind of oversight over an agent (the government or the administration). They are, so to speak, auxiliary mechanisms to aid political principals to oversee their administrative agents (Bovens, 2005a; Bovens, 2005b). The mandates of ombudsmen and audit offices are therefore based on the premise of independence. Their investigations are performed according to their own frames of reference (scope, research questions, norms and standards, etc.), and without the organization under scrutiny asking for it. Moreover, their reports are always made public (D'hoedt & Bouckaert, 2011; Desomer, Put & Van Loocke, 2013).

The focus of the feedback

Goal-seeking feedback vs. goal-changing feedback

Goal-seeking feedback gives information about the degree to which the stated goals are achieved. Goal-seeking feedback is characteristic of single-loop learning. This kind of feedback does not challenge the purpose of the system: goals, beliefs, values and conceptual frameworks ('the governing values') are taken for granted without critical reflection. It may solve problems but ignores the question of why the problem arose in the first place. Goal-changing feedback, by contrast, does question the appropriateness of the stated goals and the underlying norms and assumptions. This kind of feedback is characteristic of double-loop learning and may lead to discontinuous change and innovation (Van der Knaap, 1995; Morgan, 2006b).

Internal vs. external perspective

The focus of the feedback may be on issues of internal design or on the relationship between the organization and the environment. To make this argument more clear, let us introduce Figure 7, which depicts the management and policy cycle as an open system model.

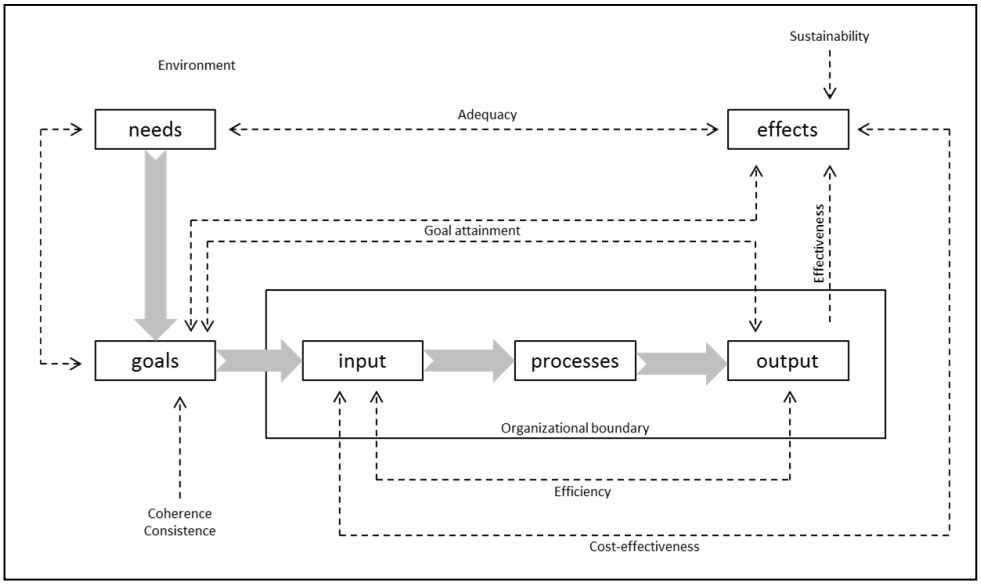
De Peuter (2011) explains the logics of this model: Government is confronted with societal needs. In response to these needs, the government articulates policy objectives, both at the strategic and the operational level. Public sector organizations are charged with the fulfilment of these objectives. In order to do this, the organization needs inputs (raw materials, human resources, information and financial resources). In the subsequent transformation process, these inputs are transformed into products and services (output). These outputs are exported back into the environment. They are intended to have an impact on the societal needs, which were the reason for the initiation of the policy initiative (De Peuter, 2011).

Feedback about the internal design of the organization is preoccupied with techniques and making techniques more efficient. Attention is focused on 'input', 'processes', 'output' and their interrelationships. Relevant questions are: Could we do what we are currently doing in more productive ways, do it cheaper, use alternative methods or approaches for the same objectives? Other forms of feedback are more concerned with the functioning of the system in relation to its changing environment. Attention will be focused on the societal needs and the societal effects of policies. Relevant topics are, among others: the study of environmental trends and needs, the impact of the organization and its policies on the environment, including both the intended and the usually unanticipated consequences (Katz & Kahn, 1978; De Peuter, 2011).

Functioning of a subsystem vs. functioning of the total system

Some types of feedback focus solely on the functioning of a single subsystem, while others focus on the system as a whole and on the interrelationship of the subsystems within the total system. A scope which is too limited, may lead to sub-optimization. For example, the improvement of a sub-system at the expense of the organization as a whole (Van Loocke & Put, 2010).

Figure 6: Management and policy cycle as an open system model



Source: De Peuter, 2011, 109

4. Accountability

What is public accountability?

According to Schillemans & Bovens (2011), a distinction can be made between accountability as a virtue and accountability as a social relation or a mechanism. Accountability used in the sense of virtue is a normative concept. It refers to a set of standards used to evaluate the behaviour of (public) actors. 'Being accountable' or 'acting in an accountable way' is seen as a positive characteristic of public officials or organizations. It is a similar virtue as being responsive and responsible, and being willing to act in a transparent and fair way. Accountability defined as a social relationship or mechanism, on the other hand, refers to 'being held accountable' and involves an obligation of an actor to explain and justify its conduct to a significant other (Schillemans & Bovens, 2011). In this contribution, we will use accountability in the latter sense.

4.1 The fundamental notion of accountability

Many authors have offered theoretical contributions and definitions of accountability. We will discuss and compare three of them. We start with the influential definition of the 'Utrecht School' of accountability[3], and consider some amendments and additions made by Lindberg (2013), who very recently conducted a literature review about accountability. We then contrast this with the dimensions of accountability suggested by Koppell (2005).

'Utrecht School' of accountability & Lindberg

[3] Mark Bovens and his colleagues Thomas Schillemans and Paul 't Hart.

Underlying the concept of accountability, is the principle of delegating authority to an agent, evaluating the performance of the agent, and applying sanctions if the performance is substandard. To paraphrase Lindberg, the basic idea of accountability is this: when decision-making power is delegated from a principal to an agent, there must be a mechanism in place to hold the agent accountable for its decisions and if necessary to sanction the agent (Lindberg, 2013). Thus, at a basic level, accountability is closely associated with authority. An actor who is merely executing orders without any discretionary power, cannot be a legitimate object of accountability (Lindberg, 2013).

According to the 'Utrecht School' of accountability, which has been very influential in the study of this topic, accountability can be defined as a relationship between an actor (who can be either an individual person or an organization) and a forum (which can be either an individual person, an organization or a virtual entity (e.g. a God)) in which the actor has or feels an obligation (which can be either formal, informal or even self-imposed) to explain and justify his or her conduct to the forum, in which the forum can pose additional questions and pass judgment, after which the actor may face consequences (Bovens, Schillemans & 't Hart, 2008, 225; Bovens, 2005a, 184-185).

As Bovens (2005a) indicates, this definition reveals at least three elements of an account giving relationship: information, debate and judgment. The element of information implies that the actor has or feels an obligation to inform the forum about his or her behaviour or performance. When a failure or an incident has occurred, the provision of information is often not sufficient, and has to be supplemented with explanation and justification for the failure. In response, the forum may initiate a debate with the actor, by discussing and questioning the quality and adequacy of the information or the appropriateness and legitimacy of the behaviour. Finally, it is not unusual that the forum renders judgment on the behaviour or performance of the actor. Furthermore, a negative verdict by the forum may result in some sort of sanction (Bovens, 2005a).

However, according to Bovens (2005b), not all elements are equally crucial in this definition. In essence, in order to qualify a relationship as an accountability relationship, it suffices that the actor, has or feels an obligation to inform the forum about his conduct. The accountability relationship gains weight when the forum has the possibility to pose further questions and to pass judgment about the performance of the actor. The most severe form of accountability arises when the forum has the opportunity to impose formal or informal sanctions on the occasion of a negative judgment (Bovens, 2005b).

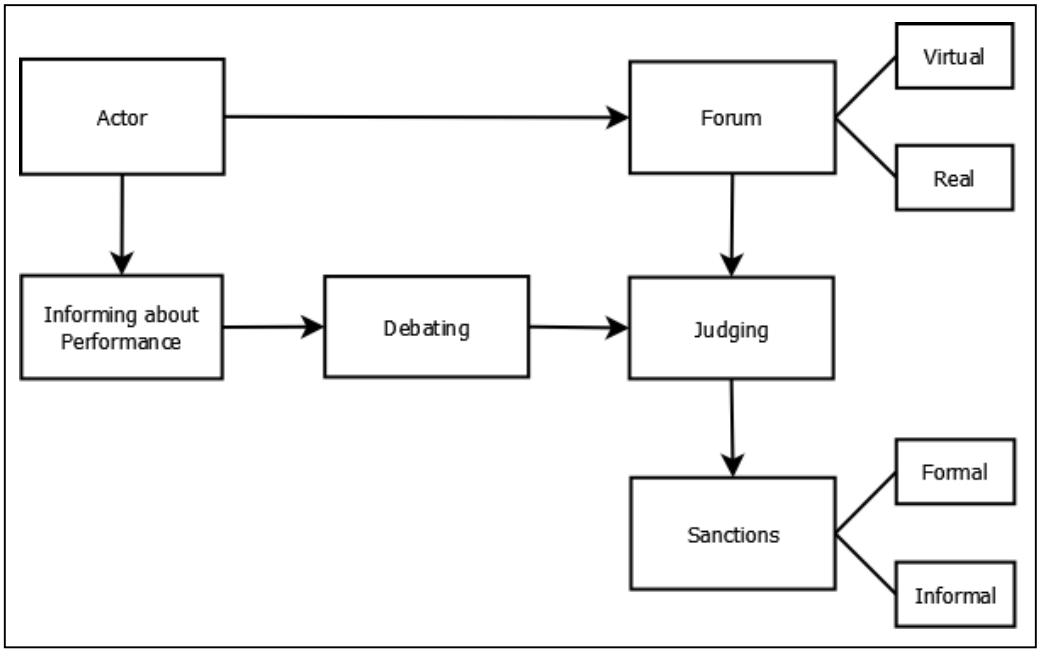
In addition to the definition of the 'Utrecht School', and also somewhat in deviation from it, Staffan I Lindberg identifies five defining characteristics of accountability:

- An agent or institution (A for agent) who has an obligation to give an account
- An area or domain (D for domain) subject to accountability
- An agent or institution (P for principal) to whom A has to give account
- The right of P to require A to inform and explain/justify decisions with regard to D

The right of P to sanction A if A fails to inform, explain or justify decisions with regard to D (Lindberg, 2013). The right of P to sanction A for failing to provide the requested information or explanation is considered by Lindberg to be an essential defining characteristic of accountability. Lindberg convincingly argues that excluding this right from the definition would reduce the

notion of accountability. Indeed, without the possibility of sanctions, decision-makers and actors would only disclose and explain their conduct to a level with which they themselves feel comfortable (Lindberg, 2013).

Figure 7: Accountability of the actor by the forum



Source: Bovens, 2005a, 186

The definition of Lindberg differs somewhat from the definition of the Utrecht School with regard to condition 5. In the definition of Lindberg, the right of P to sanction is limited to the right to sanction A for failing to provide the requested information or explanation (Lindberg, 2013). In the definition of the Utrecht School, by contrast, the right of P to sanction is extended to the right to sanction A for (the (in)appropriateness and/or (il)legitimacy of) the conduct itself. However, this extension of the definition is mitigated by the fact that Bovens et al. do not consider this right to be an essential defining characteristic of accountability (Bovens, 2005b).

Koppell

Koppell (2005) proposes five dimensions of accountability: transparency, liability, controllability, responsibility, and responsiveness. The first two dimensions of accountability (transparency and liability) are considered by Koppell to be fundamental, supporting notions of accountability. Transparency refers to the idea that an accountable actor must disclose and/or explain its conduct (Koppell, 2005). This dimension is closely related to the 'information phase' in the definition of the 'Utrecht School'. Liability refers to the possibility of sanctions: accountable actors may face consequences that are attached to performance (Koppell, 2005).

The other three dimensions of accountability are labelled by Koppell as the substantive conceptions of accountability. Controllability refers to the idea that accountable public organizations should carry out the will of the people as expressed through their elected representatives. The key question is: did the organization follow the orders of its principal? Responsibility refers to the idea that accountable public actors should not simply follow orders, but should also be guided and constrained in their conduct by laws, rules, norms, and professional

and moral standards. Finally, public organizations may be called responsive if they meet the needs and demands of the population they are serving (Koppell, 2005).

Lindberg is sceptical about these three so called substantive conceptions of accountability. He argues that controllability, responsibility and responsiveness may be desired outcomes or after-effects of some types of accountability relationships, but that these conceptions should not be understood as integral to the notion of accountability itself (Lindberg, 2013).

4.2 Classifications of public accountability

There are many ways to classify types of accountability. According to Bovens (2005b), four guiding questions may be asked: *Who should give account? To whom? Why? About what?*

The '*to whom*' question makes a distinction between types of forums. Bovens distinguishes between (1) political accountability: account giving along the chain of political principal-agent relationships, that is to say towards ministers, elected representatives, and ultimately voters; (2) legal accountability: account giving towards civil or administrative courts; (3) administrative accountability: account giving towards auditors, ombudsmen, inspectors and controllers; (4) professional accountability: account giving towards (associations of) professional peers; and (5) societal accountability: account giving towards citizens, interest groups, the media (Bovens, 2005a, 2005b).

The *who* question is referred to by Dennis Thompson as the problem of many hands: "Because many different officials contribute in many ways to decisions and policies of government, it is difficult even in principle to identify who is morally responsible for political outcomes" (D. Thompson, quoted in Bovens, 2005a, p. 189). Bovens identifies a number of accountability strategies for forums to deal with the problem of many hands:

- Corporate accountability: many public organizations are considered to be corporate bodies with independent legal status. In this capacity, the organization can be held accountable as a unitary actor. Legal and administrative forums often apply this strategy.

- Hierarchical accountability: this strategy is dominant in organizational and political accountability relations. Towards the outside world, the minister or the senior civil servant takes complete responsibility for the actions of the units under their authority.

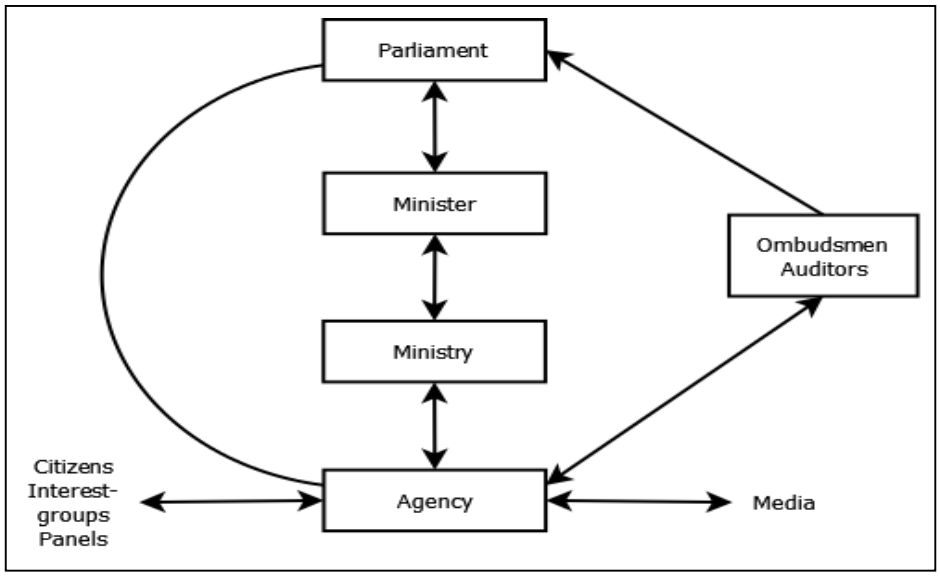
- Individual accountability: this strategy, which is typical for professional accountability, is based on strict individual accountability. Each individual is held accountable for his or her personal contribution to the conduct of the organization (Bovens, 2005a, 2005b).

The *why* question relates to the nature of the obligation: why does the actor feel compelled to give account? Bovens (2005b) makes a distinction between diagonal, vertical and horizontal accountability. First of all, the relationship between actor and forum may be a vertical one. If this is the case, the forum has formal and hierarchical powers over the actor and can force the actor to give account. Most forms of political and legal accountability are characterized by this kind of vertical relationship between actor and forum. Alternatively, actor and forum may find themselves in a horizontal relationship. When this is the case, there is no formal obligation on behalf of the actor to give account. Account is given on a voluntary basis. Societal accountability is a typical example of this. Finally, there is the possibility of an intermediate form: diagonal

accountability. An accountability relationship may be qualified as diagonal when there is neither a strict hierarchical relationship, nor pure voluntariness (Bovens, 2005b).

Administrative accountability mechanisms frequently qualify as diagonal forms of accountability. For example, ombudsmen are often charged by a political principal (a minister or parliament) to exercise some kind of oversight over an agent and to report their findings to the principal. There is, however, no direct hierarchical relationship between the ombudsman and the organization under scrutiny (Bovens, 2005b). Typically, ombudsman offices do not have the right to sanction the agents for their actions or to coerce them into compliance. However, they can often use the courts to sanction agents if they fail to provide the requested information or explanations (Lindberg, 2013).

Figure 8: Horizontal, vertical and diagonal accountability



Source: Bovens, 2005a, 197

Fourth, one can ask the question *about what* aspect of the conduct information and explanation is required. Some accountability arrangements may focus on legal compliance, while others may focus on financial correctness, and still others on the efficiency and effectiveness of the policy. Another possible distinction is that between accountability for the process and accountability for the product (Bovens, 2005b).

The four guiding questions of Bovens may be supplemented by two additional dimensions, raised by Radin & Romzek (1996) and echoed by Lindberg (2013). A first dimension relates to the source of the accountability relationship. The accountability holder (or principal) can be internal or external to the agent being held accountable. For example, when a manager of an agency asks his or her subordinates to justify their behaviour, the source of the accountability relationship is internal. On the other hand, when voters hold their representatives to account, the source of the accountability relationship can be labelled as external. The second dimension is the degree of control exercised by the forum over the actor. This may vary from extremely detailed control and close scrutiny based on specific rules and regulations, to highly diffuse control and minimal scrutiny (Lindberg, 2013; Koppell, 2005).

In addition to these six guiding questions, we would like to include a seventh one: the degree of publicness of the account giving. Pure public accountability is done in public. This means that the account giving is not done discretely, behind closed doors, but instead that it is open or at least accessible to citizens and the general public. Information about the conduct of the agent is widely available, the interrogations and debates are accessible to the public and the forum discloses its judgment (Bovens, 2005a). However, most organizational forms of accountability are strictly speaking not public. The account giving done by civil servants towards their superiors is a form of internal account giving which is usually not accessible to the public at large (Bovens, 2005a). Nevertheless, these internal, organizational forms of accountability can also be important levers or inhibitors for organizational learning and change.

4.3 The functions of accountability mechanisms

Central to the concept of accountability, is the idea that when decision-making power is transferred from a principal to an agent, there must be a mechanism in place for holding the agent accountable for its decisions and if necessary to sanction the agent (Lindberg, 2013). Therefore, the first and foremost function of public accountability is democratic control and oversight by the political principal over the delegated powers exercised by their agents (Bovens, 2005a, 2005b).

In recent decades, the rise of (quasi) autonomous agencies has weakened the ministerial powers of oversight and control, thereby undermining the principle of ministerial responsibility, and creating a political accountability gap. Indeed, ministers remain formally answerable to parliament for the performance of these agencies, yet in practice, they are structurally uninformed about their day to day operations. Partly in reaction to this rising accountability gap, ombudsmen and audit offices have been created as auxiliary mechanisms to aid political principals to oversee their administrative agents (Bovens, 2005a).

A second function of public accountability is to protect and/or enhance the integrity of public governance. The assumption is that, by securing information disclosure and justification, public managers are deterred from misusing their delegated powers (Bovens, 2005a).

A third crucial function is the learning and improvement function of accountability mechanisms (Aucoin & Heintzman, 2000). Indeed, many ombudsmen and audit offices explicitly indicate in their mission statements that their goal is not only to oversee government performance, but also to help public service organizations to improve their performance (Van Loocke & Put, 2010). In the next section, we will explore in what ways accountability arrangements can foster learning behaviour and improvement in public sector organizations.

4.3 The potential contribution of (administrative) accountability mechanisms

In this section, we will argue that a number of features of accountability mechanisms have the potential to foster learning, improvement, and innovation in public sector organizations. These features are notably: the provision of feedback information, the provocation of reflection, the provocation of debate, the public nature of the account giving, and the possibility of sanctions and/or rewards. The former three features relate to the cognitive development of public sector organizations. The latter two pertain to the behavioural dimension of learning: the motivation of public sector organizations to pursue actual improvements and changes.

Information, reflection, and debate

In the accountability literature, it is argued that a public accountability arrangement, if organized in an appropriate way, confronts public managers on a regular basis with feedback information about their own organization and stimulates both 'accountors' and 'accountees' to reflect upon and to debate about the successes and failures of past policies, both separately and in dialogue with one another (Bovens, 2005b, 47; Bovens, Schillemans & 't Hart, 2008, 233). The literature about learning teaches us that these three features – the provision of feedback information, the provocation of reflection, and the provocation of debate – may induce cognitive development and thus learning.

To begin with, the provision of feedback about past performances is crucial to corrective system learning. Indeed, on the basis of information about the outcomes and effectiveness of its actions, a policy actor can correct its errors and improve its overall functioning (Van der Knaap, 1995). Moreover, the stimuli emanating from the feedback information may lead to the feeling of cognitive dissonance which may induce the policy actor to reflect on the appropriateness of policies and their underlying policy theories (Van der Knaap, 1995).

In the definition of accountability by the Utrecht School, information about the actions of the actor is provided by the actor to the forum. However, in the case of administrative accountability forums such as ombudsmen and audit offices, the feedback information will often be gathered and processed by the forum. Ideally, the forum gathers information about the actions of the actor, processes this information into a clear and accurate diagnosis of important performance dimensions, and confronts the actor with it. Subsequently, the accountability arrangement may provide a setting which allows the initiation of a debate between the actors, the forum, and key stakeholders about past performances of the actor (Bovens, Schillemans & 't Hart, 2008).

In this debating phase, alternative viewpoints may be confronted, and mutual efforts of persuasion and argumentation may be made. In this way, the individuals participating in the dialectic connection are stimulated to reflect on their existing cognitive schemata (Van der Knaap, 1995).

Furthermore, by providing a potential dissonant voice, the forum might break the possible conformist patterns of thought within the organization under scrutiny (D'hoedt & Bouckaert, 2011). Indeed, organizations tend to persist in what they do because the members of an organization often share the same set of beliefs and values, and because it occurs to no-one to question the existing ways of doing things. Sources from outside the organization are often thought to be in a better position to challenge existing perspectives and paradigms, and to question long-held assumptions and behaviours (Lam, 2006; Salge & Vera, 2012). Accountability mechanisms such as ombudsmen and audit offices, which are thought to be independent institutions, seem to be in an appropriate position to provide such a voice if necessary. In short, accountability mechanisms may challenge the status quo by provoking open mindedness and reflection in political and administrative systems that might otherwise be primarily inward-looking (in 't Veld et al., 1991 – in Bovens, Schillemans & 't Hart, 2008).

The public nature of the account giving and the possibility of sanctions

The public nature of the account giving may foster competition

The provision of feedback information and alternative viewpoints, and the provocation of reflection and debate may contribute to the cognitive development of public sector organizations:

i.e. the developments of insights and cognitive associations, change in states of knowledge, and increased understanding of causal relationships. However, new insights and ideas are not always turned into new practices. A necessary condition for the conversion of new ideas into new practices is the willingness of public sector organizations to improve.

This willingness should be inherent to the government. Indeed, the power to govern a people comes from the people. As a consequence, every government has the inherent obligation to govern its subjects as well as possible (Van Gunsteren, 1985). This implies that a government should always try to ***improve*** its public policies and services (Van der Knaap, 1995).

However, many observers indicate that competition is one of the most important incentives for improvement and innovation (cf. supra). Organizations in a competitive environment can only survive if they are able to create new products, new services, more efficient production methods, better and more efficient ways of delivering services, and so on. It is argued that since the public sector lacks competition, it also lacks incentives to improve and to innovate (Bekkers et al., 2011).

Bekkers et al. (2013) observed that other scholars disagree. They indicate that, although government is mainly in a monopolistic position, there is a trend of increasing market-like competition in the public sector. For example, due to the privatization and liberalization of specific service domains, which were formerly the exclusive terrain of government, public sector organizations increasingly have to compete with private organizations (Bekkers et al., 2013). As a consequence, public sector organizations increasingly have to pay attention to the quality, effectiveness, efficiency and responsiveness of their services in order to survive. Secondly, Bekkers et al. (2013) indicate that regions and cities are increasingly competing with each other in terms attracting citizens, tourists, etc. The quality of services is an important source of competitive advantage is this contest (Bekkers et al., 2013). Thirdly, due to the decline of the importance of ideology and due to the depillarisation, voters have become increasingly footloose, pushing political parties to attract voters with the promise and proof of good governance (Bekkers et al., 2013). In other words, the improvement of the quality, effectiveness, efficiency and responsiveness of services and policies has increasingly become an issue of competition between regions, cities and political parties.

Moreover, several arrangements have been developed that make the quality and outcomes of public services more transparent. As a consequence, the performances of public sector entities are increasingly subject to comparison, both within the public sector and between the public and the private sector. Obvious examples of such arrangements are benchmarking systems and league tables (Bekkers et al., 2013). However, public accountability arrangements such as ombudsmen and audit offices may also provide such transparency. Indeed, the account giving is done in public, meaning that it is open or at least accessible to citizens (Bovens, 2005a). The fact that the quality and outcomes of public services and policies are made transparent, in combination with the increase of (quasi-)competitive elements in the public sector, may act as an incentive for service improvements (Bekkers et al., 2013).

However, there is also a downside to this transparency and competition. As Hartley & Benington (2006) rightfully point out, the increased competition between public sector organizations is detrimental to the possibilities of inter-organizational learning. Exactly because public sector organizations are increasingly subjected to competition over reputation and resources, they tend

to become less willing to share good practices, experiences, ideas and knowledge, which puts a brake on the dissemination of successful innovations (Hartley & Benington, 2006).

The possibility of sanctions and/or rewards may motivate public authorities to raise their games

Not only may the public nature of the account giving constitute an incentive for public managers to do better. The possibility of getting sanctioned for errors or shortcomings may also motivate public authorities to reevaluate their products and processes, and to search for more efficient and/or effective manners of organizing them (Bovens, Schillemans and Hart, 2008).

This argument was worked out in a detailed fashion by Wynen, Verhoest, Ongaro & van Thiel (2014). In fact, Wynen et al. assert that this idea is at the core of NPM:

> "In exchange for autonomy, public organizations (or their CEOs) would be held accountable by their minister and parliament for their performance and sanctioned or rewarded accordingly. […] It was believed that an increase in managerial autonomy combined with result control would, among others, stimulate a more innovation-oriented culture and ultimately lead to an increase of performance" (Wynen et al., 2014, 45).

In essence, the argument can be summarized as 'letting managers manage', and 'making managers manage'. Managerial autonomy provides public managers with the possibility and the latitude to experiment, to innovate, and to manage. As a complement, result control provides public managers with the pressure and the incentive to do so. Indeed, holding agencies accountable for their performance and linking result-achievement with sanctions and rewards stimulates or even forces managers to pursue higher levels of performance, quality and efficiency. This pressure may result in an (intensified) search for innovative ways to deliver services and to organize processes (Wynen et al., 2014).

However, an accountability regime which is too rigorous and focuses too harshly on mistakes and sanctions, may discourage entrepreneurship, risk-taking, initiative and creativity. Mistakes and failures are part of any learning process. Innovation can be seen as a journey which is not linear and rational but which leads to dead-ends, mistakes, setbacks, and obstacles. When an accountability mechanism focuses to harshly on sanctions for making 'mistakes' or for not realizing immediate results, public managers will learn to avoid risk-taking, and to shield themselves against potential mistakes and criticism (Van Loocke & Put, 2010; Bovens, 2005a; Behn, 2001; Bekkers et al., 2013; Hartley, 2005).

In addition, performance targets that are too static, may lead to the continuation of existing ways of working, to stagnation, and to the inhibition of innovation (Wynen et al., 2014).

Why do (administrative) accountability mechanisms have the potential to stifle learning and innovation in public sector organizations?

Thus far, we have discussed the possible ways in which (administrative) accountability mechanisms may contribute to learning, improvement, and innovation in public sector organizations. We should, however, take into account that accountability mechanisms, when organized in an inappropriate way, may also have detrimental effects on learning, improvement, and innovation. In this section, we will briefly discuss some possible dysfunctions of accountability mechanisms, insofar as they are relevant to the goal of learning and improving.

- Formalism and goal displacement. An accountability regime which is too rigorous, may turn public institutions into formalistic bureaucracies which are obsessed with conformity with rules and procedures. Instead of a means to provide insight in and reflection about performances and processes, the account giving may become a goal in itself (Bovens & 't Hart, 2005).
- Perverted behaviour and window dressing. An accountability regime which is too rigorous, may encourage perverted behaviour. Public managers may get better at fulfilling the requirements imposed by their accountability forums. However this does not necessarily mean that the actual performance of these public organizations in terms of policy-making and public service delivery will also improve. The managers may create a façade of plans, procedures and goals to satisfy the forum, while behind the façade, everything continues as before (Van Loocke & Put, 2010; Bovens, Schillemans & 't Hart, 2008).
- Tunnel vision and sub-optimization. Accountability forums may systematically focus on certain aspects, while ignoring others. For example, focusing on performance, but ignoring legality; focusing on technical aspects, but ignoring human aspects. Furthermore, a scope which is too limited, may lead to sub-optimization. For example, the improvement of a sub-system at the expense of the organization as a whole (Van Loocke & Put, 2010).
- Rigidity and paralysis. An accountability regime which is too rigorous and focuses too harshly on mistakes and sanctions, may discourage entrepreneurship, risk-taking, initiative and creativity. Mistakes and failures are part of any learning process. Innovation can be seen as a journey which is not linear and rational but which leads to dead-ends, mistakes, setbacks, and obstacles. When an accountability mechanism focuses to harshly on sanctions for making 'mistakes' or for not realizing immediate results, public managers will learn to avoid risk-taking, and to shield themselves against potential mistakes and criticism (Van Loocke & Put, 2010; Bovens, 2005a; Behn, 2001; Bekkers et al., 2013; Hartley, 2005).
- Conflicting expectations. Actors may be confronted with different accountability forums, each with its own set of evaluation criteria. These sets may be partially overlapping, but also partially diverging, and even mutually contradictory. It may be difficult to combine these different expectations or to prioritize between them. As a consequence, organizations trying to meet conflicting expectations are likely to end up in a state of dysfunctional paralysis. They tend to oscillate between behaviours which are consistent with conflicting notions of accountability (Schillemans & Bovens, 2011; Koppell, 2005; Bovens, Schillemans & 't Hart, 2008).

5. Conclusion

If the above literature review is to make one thing clear, it is that Feedback, Accountability and Learning are extremely complex and multi-facetted concepts. It is therefore perhaps necessary to sum up the most significant factors. A complete, schematic overview, can be found in the annex.

For Learning, the idea of individual and organizational learning are strongly intertwined. Concepts such as cybernetics, organizational memory and knowledge management strongly focus on the organizational level, whereas psychological safety and social learning (amongst others) lean more towards the individual level of learning. The fact of the matter is that organizations are made up of individuals, that individuals function within structures, hierarchies and organizations,

and that both levels influence each other. By looking at inter-organizational learning, we can add a third level as well. Just as people learn from other people, organizations can learn from other organizations. How people and organizations learn from their own and others' past experiences can strongly influence the potential for innovation. Doing something new, and improving standing processes and/or products requires learning from the past *and* the status quo. As logical as this sounds, this is complex when one dives into the literature. Learning is perhaps the most elaborately researched dimension in our FAL-model, resulting in the largest number of factors to potentially influence social innovation.

Feedback is an equally indispensable part of the internal processes in an organization's endeavour to innovate. Although fewer concepts have been put forward by the literature regarding feedback, most are multifaceted. Besides the effect of feedback on goals and objectives (Cybernetics), organizations can build mental and physical walls when receiving feedback information (Autopoiesis). Finally, the source of the feedback and the focus of the feedback can greatly contribute to the effect it has on innovation processes. Feedback forms a step prior to learning and innovation. Before learning and innovation can take place, getting information, from which you can then learn, is obviously essential. The question remains where this information comes from.

One of the places where feedback information can be derived from is an accountability mechanism, or several of these mechanisms. Being held accountable obligates an organization to self-evaluate, and external accountability provides the organization with feedback information on its performance. Who specifically is held accountable, to whom one is held accountable, and the degree of publicness of this accountability process are only a few of the factors which determine how this dimension influences the innovation processes of public organizations.

Together, Feedback, Accountability and Learning form integral parts of a cyclical process in which an organization self-evaluates, receives information, perceives it, and learns from it. Or not. The question which remains now is how these dimensions actually function within public organizations. When we put this mechanism as simply as possible, it means that the non-existence of the FAL-model within an organization, leads to the non-existence of sustainable social innovation. Or, put in more logical terms:

$$F + A + L \rightarrow \text{Sustainable Social Innovations (1)}$$

$$\neg F + \neg A + \neg L \rightarrow \neg \text{Sustainable Social Innovations (0)}$$

The above summed-up FAL-model will need to be translated into survey questions, and a further methodology will need to be designed in order to measure the factors in public organizations, to connect these factors with concrete innovations, and finally to assess the influence of other, external factors on the innovations and innovation processes of public sector organizations. These steps were all taken during the LIPSE research of Working Package 3, and was published in the research report, which can be accessed on www.lipse.org/publications. Most of the steps in the research efforts to unravel these processes and phenomenon will be published in other working papers in this series.

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7. Annex

Learning

Concept	Dimensions	
Cybernetics	Single-loop learning	Active measurement of a wide spectrum of performance
	Double-loop learning	Questioning the appropriateness of the goals and objectives
	Deutero learning	Institutionalized capacity to learn
Individual cognitive learning & social learning	Cognitive dissonance and confrontation of viewpoints	General openness that encourages questioning, inquiry and constructive criticism
		Openness for feedback information, for alternative opinions and perspectives
		Tolerance for uncertainty: allowing cognitive dissonance
	The arousal of reflection and debate	Internal platforms, arenas, forums to discuss and debate
-Psychological safety -Defensive routines -Error/risk-avoidance	Tolerance for errors	Sense of safety about making errors and discussing them openly
		No-blame culture
		Trust-based culture
Organizational memory Knowledge management	Organizational memory	Archives
		Documentation of procedures
	Knowledge management	Making tacit knowledge explicit
		Recording, conservation and retrieval of knowledge and experience
		Creating, acquiring, capturing, aggregating, codifying, sharing and using knowledge
Exploitation vs. exploration	Exploration	Large variety of relevant skills and knowledge that can be exploited
		Personnel turnover
	Exploitation	Focus on routinization, refinement, reliability
		Focus on the elaboration of existing experiences and skills

Feedback

Open system / organism metaphor	Adaptiveness, alignment
Autopoiesis	Perception filter
	Closing off from impulses from outside in order to shield itself from excessive turbulence and complexity
	Closing off from impulses from outside after a period of adaptation and innovation
Cybernetics / self-regulation	Clear performance goals and objectives
	Monitoring and comparing
	Corrective action
	Questioning the appropriateness of the goals and objectives

Organizational locus of informational subsystems	The necessity of an informational subsystem
	The optimal place for reporting intelligence
Source of the feedback	Staff – stakeholders – monitoring – policy evaluations – ombudsmen reports – (performance) audits – …
	Variety of sources
Focus of the feedback	Goal-seeking vs. goal-changing feedback (cf. single-loop vs. double loop learning)
	Internal design vs. relationship with the environment
	Functioning of a subsystem vs. functioning of the total system

Accountability

Who is held accountable?	The organization as a whole – the senior civil servant – the individual civil servant – …
To whom?	To administrative superiors – to the minister, parliament, voters – to ombudsmen, auditors, inspectors, … – …
About which aspect of the administrative performance?	Legal compliance – financial correctness – efficiency and efficacy – …
Nature of the obligation	Formal obligation vs. voluntariness
Degree of publicness	Discrete and behind closed doors vs. open or at least accessible to citizens and the general public
The functions of accountability mechanisms	Democratic control and oversight – integrity – learning and improvement
The dysfunctions of accountability mechanisms	Accountability overload: number of accountability mechanisms & conflicting expectations
	Focusing too harshly on mistakes and sanctions => perverted behavior, window dressing, error- and risk-avoidance,…
	Systematically focusing on certain aspects, while ignoring others => tunnel vision and sub-optimization